## PATENT COOPERATION TREATY

|                                                                                                                                              | From the                  | EINTERNATIONAL B                                                                    | UREAU                     |  |
|----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------------------------------------------------------------------------------------|---------------------------|--|
| PCT                                                                                                                                          | To:                       |                                                                                     |                           |  |
| NOTIFICATION OF THE RECORDING OF A CHANGE  (PCT Rule 92bis.1 and Administrative Instructions, Section 422)  Date of mailing (day/month/year) | Sandv<br>Intelle<br>S-811 | MELIN, Linda<br>Sandvik AB<br>Intellectual Property<br>S-811 81 Sandviken<br>Sweden |                           |  |
| 23 August 2005 (23.08.2005)                                                                                                                  | <u> </u>                  | -                                                                                   |                           |  |
| Applicant's or agent's file reference LM 11940 WO                                                                                            |                           | IMPORTANT NOTIFICATION                                                              |                           |  |
| International application No. PCT/SE2004/001173                                                                                              | B C                       | International filing date (day/month/year) 09 August 2004 (09.08.2004)              |                           |  |
| The following indications appeared on record concerning:      The applicant the inventor                                                     | the agent                 | the commo                                                                           | on representative         |  |
| Name and Address SANDVIK AB S-811 81 Sandviken                                                                                               |                           | State of Nationality SE Telephone No.                                               | State of Residence<br>SE  |  |
| Sweden                                                                                                                                       |                           |                                                                                     |                           |  |
|                                                                                                                                              |                           | Facsimile No.                                                                       |                           |  |
|                                                                                                                                              |                           | Teleprinter No.                                                                     |                           |  |
| 2. The International Bureau hereby notifies the applicant that to X the person the name the ad                                               | <del></del>               | nange has been recorded on the nationality                                          | concerning: the residence |  |
| Name and Address                                                                                                                             |                           | State of Nationality                                                                | State of Residence        |  |
| SANDVIK INTELLECTUAL PROPERTY HB<br>S-811 81 Sandviken<br>Sweden                                                                             | -                         | SE<br>Telephone No.                                                                 | SE                        |  |
|                                                                                                                                              | F                         | Facsimile No.                                                                       |                           |  |
|                                                                                                                                              | -                         | Feleprinter No.                                                                     |                           |  |
| 3. Further observations, if necessary:                                                                                                       | <u></u>                   |                                                                                     |                           |  |
|                                                                                                                                              |                           |                                                                                     |                           |  |
| 4. A copy of this notification has been sent to:                                                                                             |                           |                                                                                     |                           |  |
| X the receiving Office                                                                                                                       | X                         | the designated Offices of                                                           | concerned                 |  |
| the International Searching Authority                                                                                                        |                           | the elected Offices conc                                                            | erned                     |  |
| the International Preliminary Examining Authority                                                                                            |                           | other:                                                                              |                           |  |
| The last week and the second                                                                                                                 | Authorized of             | ficer                                                                               |                           |  |
| The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland                                                      |                           | V. BLANC                                                                            |                           |  |
| Facsimile No. +41 22 338 7090                                                                                                                | Telephone No              | o. (41-22) 338 9666                                                                 |                           |  |

## INTERNATIONAL SEARCH REPORT

International application No. PCT/SE 2004/001173

| A. CLASSIFICATION OF SUBJECT MATTER                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                            |                                     |                       |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------|--|--|
| IPC7: H01L 31/02, H01L 31/032 According to International Patent Classification (IPC) or to both national classification and IPC                                                                                                                                                                               |                                                                                                                                                                                                                                            |                                     |                       |  |  |
| B. FIELD                                                                                                                                                                                                                                                                                                      | S SEARCHED                                                                                                                                                                                                                                 |                                     |                       |  |  |
| Minimum d                                                                                                                                                                                                                                                                                                     | ocumentation searched (classification system followed b                                                                                                                                                                                    | y classification symbols)           |                       |  |  |
| IPC7:                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                            |                                     |                       |  |  |
| Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched SE,DK,FI,NO classes as above                                                                                                                                                    |                                                                                                                                                                                                                                            |                                     |                       |  |  |
| Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)                                                                                                                                                                                  |                                                                                                                                                                                                                                            |                                     |                       |  |  |
| ארב דות או                                                                                                                                                                                                                                                                                                    | FA FRO_THITFRHAL DAI IFFF FLOFE                                                                                                                                                                                                            |                                     |                       |  |  |
|                                                                                                                                                                                                                                                                                                               | TA, EPO-INTERNAL, PAJ, IEEE, ELSEN                                                                                                                                                                                                         | ATEK                                |                       |  |  |
| C. DOCU                                                                                                                                                                                                                                                                                                       | MENTS CONSIDERED TO BE RELEVANT                                                                                                                                                                                                            |                                     | r                     |  |  |
| Category*                                                                                                                                                                                                                                                                                                     | Citation of document, with indication, where app                                                                                                                                                                                           | propriate, of the relevant passages | Relevant to claim No. |  |  |
| A                                                                                                                                                                                                                                                                                                             | K. Herz, et al., "Diffusion barriers for CIGS solar<br>cells on metallic substrates", Thin Solid Films<br>Volumes 431-432, 1 May 2003, Pages 392-397, Zentrum<br>für Sonnenenergie- und Wasserstoff-Forschung (ZSW),<br>Stuttgart, Germany |                                     | 1-13                  |  |  |
|                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                            |                                     |                       |  |  |
| A                                                                                                                                                                                                                                                                                                             | Karin Granath, Marika Bodegård a<br>effect of NaF on Cu(In, Ga)S<br>cells", Solar Energy Materia<br>Volume 60, Issue 3, 31 Janua<br>Department of Material Scier<br>Center, Uppsala University,<br>Uppsala, Sweden                         | 1-13                                |                       |  |  |
|                                                                                                                                                                                                                                                                                                               | <del></del>                                                                                                                                                                                                                                |                                     |                       |  |  |
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|                                                                                                                                                                                                                                                                                                               | •                                                                                                                                                                                                                                          | •                                   | · .                   |  |  |
| Y Further documents are listed in the continuation of Box C. See patent family annex.                                                                                                                                                                                                                         |                                                                                                                                                                                                                                            |                                     |                       |  |  |
| * Special categories of cited documents . "T" later document published after the international filling date or priority                                                                                                                                                                                       |                                                                                                                                                                                                                                            |                                     |                       |  |  |
| "A" document defining the general state of the art which is not considered to be of particular relevance date and not in conflict with the application but cited to understand the principle or theory underlying the invention "E" earlier application or patent but published on or after the international |                                                                                                                                                                                                                                            |                                     |                       |  |  |
| filing date  "L"  document of particular relevances the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone                                                                                                                    |                                                                                                                                                                                                                                            |                                     |                       |  |  |
| cited to establish the publication date of another citation or other special reason (as specified)  "Y" document of particular relevance: the claimed invention cannot be                                                                                                                                     |                                                                                                                                                                                                                                            |                                     |                       |  |  |
| means  "P" document published prior to the interestical filing date but later than                                                                                                                                                                                                                            |                                                                                                                                                                                                                                            |                                     |                       |  |  |
| the priority date claimed "oc document member of the same patent family                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                            |                                     |                       |  |  |
| Date of the actual completion of the international search  November 2004  1 1 -11- 2004                                                                                                                                                                                                                       |                                                                                                                                                                                                                                            |                                     |                       |  |  |
| Name and                                                                                                                                                                                                                                                                                                      | Name and mailing address of the ISA/  Authorized officer                                                                                                                                                                                   |                                     |                       |  |  |
| Swedish Patent Office                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                            |                                     |                       |  |  |
|                                                                                                                                                                                                                                                                                                               | 30x 5055, S-102 42 STOCKHOLM Erik Miliander/MN                                                                                                                                                                                             |                                     |                       |  |  |
| racsimile l                                                                                                                                                                                                                                                                                                   | No. +46 8 666 02 86                                                                                                                                                                                                                        | Telephone No. +46 8 782 25 00       |                       |  |  |

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 2004/001173

| C (Continu | ation). DOCUMENTS CONSIDERED TO BE RELEVANT                                                                                                                                                                                                                                                                                                                                                          | <del></del>          |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| Category*  | Citation of document, with indication, where appropriate, of the relevant passages                                                                                                                                                                                                                                                                                                                   | Relevant to claim No |
| <b>A</b>   | Takuya Satoh et al., "Cu(In,Ga)Se2 solar cells on stainless steel substrates covered with insulating layers", Solar Energy Materials and Solar Cells, Volume 75, Issues 1-2, January 2003, Pages 65-71 Living Environment Development Center, Matsushita Electric Industrial Co., Ltd., Kyoto, Japan                                                                                                 | 1-13                 |
| <b>A</b>   | K. Herz et al., "Dielectric barriers for flexible<br>CIGS solar modules", Proceedings of Symposium P on<br>Thin Film Materials for Photovoltaics, Thin Solid<br>Films, Volumes 403-404, 1 February 2002, Pages<br>384-389, Zentrum für Sonnenenergie- und<br>Wasserstoff-Forschung (ZSW), Stuttgart, Germany,<br>Institut für Plasmaforschung (IPF) der Universität<br>Stuttgart, Stuttgart, Germany | 1-13                 |
| <b>A</b>   | Basol, B.M. Kapur, V.K. Leidholm, C.R. Halani, A.,  "Flexible and light weight copper indium diselenide solar cells" n: Photovoltaic Specialists Conference, 1996., Conference Record of the Twenty Fifth IEEE, Int. Solar Electr. Technol., Inglewood, CA, USA, Publication Date: 13-17 May 1996, On page(s): 157 - 162, Number of Pages: 1554, Inspec Accession Number: 5507451                    | 1-13                 |
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